

[0053] A phrase such as an “aspect” does not imply that such aspect is essential to the subject technology or that such aspect applies to all configurations of the subject technology. A disclosure relating to an aspect may apply to all configurations, or one or more configurations. A phrase such as an aspect may refer to one or more aspects and vice versa. A phrase such as an “embodiment” does not imply that such embodiment is essential to the subject technology or that such embodiment applies to all configurations of the subject technology. A disclosure relating to an embodiment may apply to all embodiments, or one or more embodiments. A phrase such as an embodiment may refer to one or more embodiments and vice versa.

[0054] The word “exemplary” is used herein to mean “serving as an example or illustration.” Any aspect or design described herein as “exemplary” is not necessarily to be construed as preferred or advantageous over other aspects or designs.

[0055] All structural and functional equivalents to the elements of the various aspects described throughout this disclosure that are known or later come to be known to those of ordinary skill in the art are expressly incorporated herein by reference and are intended to be encompassed by the claims. Moreover, nothing disclosed herein is intended to be dedicated to the public regardless of whether such disclosure is explicitly recited in the claims. No claim element is to be construed under the provisions of 35 U.S.C. §112, sixth paragraph, unless the element is expressly recited using the phrase “means for” or, in the case of a method claim, the element is recited using the phrase “step for.” Furthermore, to the extent that the term “include,” “have,” or the like is used in the description or the claims, such term is intended to be inclusive in a manner similar to the term “comprise” as “comprise” is interpreted when employed as a transitional word in a claim.

What is claimed is:

1. An electronics enclosure for providing passive cooling of electronic components while reducing electromagnetic interference (EMI) emissions, the electronics enclosure comprising:

- an electronics assembly comprising a planar substrate and at least one electronic component, the planar substrate including a conductive surface on an underside of the planar substrate;
- a heat sink coupled to the electronics assembly, the heat sink comprising a base portion configured to thermally couple to the at least one electronic component when the heat sink is coupled to the electronic assembly; and
- a conductive cover forming an enclosed volume around the electronics assembly, the conductive cover comprising a first opening configured to fit around the heat sink, at least one second opening formed in the conductive enclosure spaced from the first opening, wherein the conductive cover is in electrical contact with the conductive surface and the heat sink.

2. The electronics enclosure of claim 1, wherein a width of the base portion is less than of a width of the planar substrate.

3. The electronics enclosure of claim 1, wherein the base portion defines a slot, the heat sink comprising a heat pipe disposed in the slot.

4. The electronics enclosure of claim 3, wherein the heat pipe is flush with a bottom surface of the heat sink.

5. The electronics enclosure of claim 1, wherein the heat sink comprises a plurality of fins, and the conductive enclosure comprises an edge, the edge conductively coupled to at least one of the plurality of fins.

6. The electronics enclosure of claim 6, wherein the edge is conductively coupled to all of the plurality of fins.

7. The electronics enclosure of claim 6, wherein the edge is conductively coupled to every other fin.

8. The electronics enclosure of claim 6, wherein the edge is conductively coupled to fins separated by a distance, the distance being less than a linear distance equal to a desired cutoff frequency.

9. The electronics enclosure of claim 1, wherein the heat sink comprises a box thermally coupled to the base portion.

10. The electronics enclosure of claim 9, wherein the box comprises a plurality of passages.

11. The electronics enclosure of claim 10, wherein the plurality of passages are rectangular.

12. The electronics enclosure of claim 11, wherein the box comprises a plurality of intersecting sheets of conductive material that forms the plurality of rectangular passages.

13. The electronics enclosure of claim 10, wherein the plurality of passages are circular.

14. The electronics enclosure of claim 10, wherein the plurality of passages are L-shaped.

15. The electronics enclosure of claim 10, wherein the plurality of passages extend from a first end of the box to a second end of the box.

16. The electronics enclosure of claim 10, wherein the plurality of passages extend transversely to a width of the base portion.

17. An electronics enclosure for providing passive cooling of electronic components while reducing electromagnetic interference (EMI) emissions, the electronics enclosure comprising:

- an electronics assembly comprising a planar substrate and at least one electronic component, the planar substrate including a conductive surface on an underside of the planar substrate;
- a heat sink coupled to the electronics assembly, the heat sink comprising a base portion configured to thermally couple to the at least one electronic component when the heat sink is coupled to the electronic assembly, the heat sink comprising a conductive portion conductively coupled to the base portion, the conductive portion comprising a plurality of passages; and
- a conductive enclosure forming an enclosed volume around the electronics assembly, the enclosure comprising a first opening configured to fit around the heat sink, at least one second opening formed in the conductive enclosure spaced from the first opening, and a flange, wherein the conductive cover is in electrical contact with the conductive surface and the heat sink.

18. The electronics enclosure of claim 17, wherein the plurality of passages are open to the first opening.

19. An automatic dispensing machine comprising:

- a display comprising a top and a base; and
- an electronics enclosure for providing passive cooling of electronic components while reducing electromagnetic interference (EMI) emissions, the electronics enclosure comprising:
 - an electronics assembly comprising a planar substrate and at least one electronic component, the planar